

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An installation for desalinating or purifying saline or otherwise polluted input water, said installation comprising:

a desalination fractionation installation including a shaft extending downward into the ground and having a [lower,] hydrate formation region at a lower portion of said shaft;

an input water conduit which is arranged to provide input water to said hydrate formation region; [and]

a gas supply conduit which is arranged to provide hydrate-forming gas to said hydrate formation region; and

[said installation further comprising] a hydrate dissociation region disposed at an upper portion of said installation and in fluid communication with said hydrate formation region, [and]

wherein natural pressurization in said hydrate formation region, created by the weight of input water in said shaft, is, by itself, insufficient to cause formation of hydrate of said hydrate-forming gas;

wherein said hydrate dissociation region is artificially pressurized; and

wherein the artificial pressurization in the dissociation region and the natural pressurization in the hydrate formation region combine to create pressurization in the hydrate formation region that is suitable for the spontaneous formation of hydrate [in the hydrate formation region of the installation] of said hydrate-forming gas.

2. (Original) The installation of claim 1, wherein said hydrate dissociation region is artificially pressurized by a pressure balance reservoir system.

3. (Currently Amended) The installation of claim 2, wherein said pressure balance reservoir system pressurizes a volume of gas so as to exert hydraulic force throughout [a] the volume of [fluid] input water in said desalination fractionation installation.

4. (Original) The installation of claim 2, wherein said pressure balance reservoir system is located on the upper portion of said dissociation region.

5. (Original) The installation of claim 1, further comprising a pump and pressure regulating apparatus which pumps the intake water into the installation at a pressure which is approximately equivalent to the pressure which is artificially maintained in the dissociation region of said installation.

6. (Currently Amended) The installation of claim 1, wherein said [water intake] input water conduit has a water intake apparatus on one end thereof, and wherein said water intake apparatus is positionable at a pressure depth that is approximately equivalent to the pressure which is artificially maintained in the dissociation region of said installation.

7. (Original) The installation of claim 1, wherein said hydrate dissociation region is artificially pressurized by the head of the weight of water contained in the input water conduit.

8. (Original) The installation of claim 7, wherein said input water conduit syphons water into the installation creating the artificial pressurization in the dissociation region.

9. (Previously presented) An installation for desalinating or purifying saline or otherwise polluted input water, said installation comprising:

a desalination fractionation installation having a lower, hydrate formation region;

an input water conduit which is arranged to provide input water to said hydrate formation region; and

a gas supply conduit which is arranged to provide hydrate-forming gas to said hydrate formation region;

said installation further comprising a hydrate dissociation region disposed at an upper portion of said installation and in fluid communication with said hydrate formation region, said hydrate dissociation region comprising a plurality of cooling segments in heat exchanging relationship with said input water; and

wherein the input water is at least partially cooled by being passed through said dissociation region in heat exchanging relationship with the dissociation region, whereby heat is

absorbed from said input water as hydrate located in the dissociation region dissociates endothermically.

10. (Canceled)

11. (Currently Amended) The installation of claim [10] 9, wherein said cooling segments are separated by walls which prevent hydrate from moving laterally from one cooling segment to another.

12. (Currently Amended) The installation of claim [10] 9, wherein said cooling segments are in fluid communication with the hydrate formation region.

13. (Currently Amended) The installation of claim [10] 9, wherein said input water is carried in a heat exchanging apparatus which extends laterally across said plurality of cooling segments.

14. (Original) The installation of claim 13, wherein said input water becomes progressively cooler as it passes through each cooling segment of said plurality of cooling segments.

15. (Original) The installation of claim 14, wherein said input water conduit which is arranged to provide input water to said hydrate formation region after said input water conduit passes through each cooling segment of said plurality of cooling segments.